CLAIMS

What is claimed is:

1. A method for processing received signals in a communication system, the method comprising:

generating a plurality of upstream analog signals for a received signal;

acquiring upstream analog information related to at least a portion of said generated plurality of upstream analog signals; and

adjusting a gain for said received signal using at least a portion of said acquired upstream analog information.

2. The method according to claim 1, further comprising low pass filtering said received signal.

3. The method according to claim 1, wherein said generated plurality of upstream analog signals are narrowband analog signals.

4. The method according to claim 1, further comprising acquiring at least one sample from at least a portion said generated plurality of upstream analog signals.

5. The method according to claim 4, further comprising computing a power based on said acquired at least one sample.

6. The method according to claim 5, further comprising determining when at least one of said generated plurality of upstream analog signals is clipped.

7. The method according to claim 6, further comprising generating an intermediate gain based on said computed power of said acquired at least one sample.

8. The method according to claim 7, further comprising applying said generated intermediate gain to said at least one of said generated plurality of upstream analog signals.

9. The method according to claim 5, further comprising comparing said computed power to a plurality of defined power values.

10. The method according to claim 9, further comprising selecting a gain based on a comparable power value of said plurality of defined power values.

11. The method according to claim 9, further comprising storing said defined power values in a lookup table.

12. The method according to claim 1, further comprising applying a final gain to said received signal.

13. The method according to claim 1, further comprising converting said generated plurality of upstream analog signals to corresponding time domain signals.

14. A machine-readable storage having stored thereon, a computer program having at least one code section for processing received signals in a communication system, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

generating a plurality of upstream analog signals for a received signal;

acquiring upstream analog information related to at least a portion of said generated plurality of upstream analog signals; and

adjusting a gain for said received signal using at least a portion of said acquired upstream analog information.

15. The machine-readable storage according to claim 14, further comprising code for low pass filtering said received signal.

16. The machine-readable storage according to claim 14, wherein said generated plurality of upstream analog signals are narrowband analog signals.

17. The machine-readable storage according to claim 14, further comprising code for acquiring at least one sample from at least a portion said generated plurality of upstream analog signals.

18. The machine-readable storage according to claim 17, further comprising code for computing a power based on said acquired at least one sample.

19. The machine-readable storage according to claim 18, further comprising code for determining when at least one of said generated plurality of upstream analog signals is clipped.

20. The machine-readable storage according to claim 19, further comprising code for generating an intermediate gain based on said computed power of said acquired at least one sample.

21. The machine-readable storage according to claim 20, further comprising code for applying said generated intermediate gain to said at least one of said generated plurality of upstream analog signals.

22. The machine-readable storage according to claim 18, further comprising code for comparing said computed power to a plurality of defined power values.

23. The machine-readable storage according to claim 22, further comprising code for selecting a gain based on a comparable power value of said plurality of defined power values.

24. The machine-readable storage according to claim 22, further comprising code for storing said defined power values in a lookup table.

25. The machine-readable storage according to claim 14, further comprising code for applying a final gain to said received signal.

26. The machine-readable storage according to claim 14, further comprising code for converting said generated plurality of upstream analog signals to corresponding time domain signals.

27. A system for processing received signals in a communication system, the system comprising:

a receiver that generates a plurality of upstream analog signals for a received signal;

at least one processor that acquires upstream analog information related to at least a portion of said generated plurality of upstream analog signals; and

at least one automatic gain controller that adjusts a gain for said received signal using at least a portion of said acquired upstream analog information.

28. The system according to claim 27, further comprising at least one low pass filter that filters said received signal.

29. The system according to claim 27, wherein said generated plurality of upstream analog signals are narrowband analog signals.

30. The system according to claim 27, wherein said at least one processor acquires at least one sample from at least a portion said generated plurality of upstream analog signals.

31. The system according to claim 30, wherein said at least one processor computes a power based on said acquired at least one sample.

32. The method according to claim 31, wherein said at least one processor determines when at least one of said generated plurality of upstream analog signals is clipped.

33. The system according to claim 32, wherein said at least one automatic gain controller generates an intermediate gain based on said computed power of said acquired at least one sample.

34. The system according to claim 33, wherein said at least one processor applies said generated intermediate gain to said at least one of said generated plurality of upstream analog signals.

35. The system according to claim 31, wherein said at least one processor compares said computed power to a plurality of defined power values.

36. The system according to claim 35, wherein said at least one processor selects a gain based on a comparable power value of said plurality of defined power values.

37. The system according to claim 35, further comprising a lookup table that stores said defined power values.

38. The system according to claim 27, wherein said automatic gain controller applies a final gain to said received signal.

39. The system according to claim 27, wherein said receiver converts said generated plurality of upstream analog signals to corresponding time domain signals.

40. A system for processing received signals in a communication system, the system comprising:

a mixer;

a low pass filter coupled to said mixer; and

a plurality of gain controllers serially coupled to an output of said low pass filter; and

a plurality of analog to digital converters, wherein:

an input of a first of said plurality of analog-to-digital converters is coupled to said output of said low pass filter; and

an input of each of a remaining portion of said plurality of analog-to-digital converters is individually coupled to a corresponding output of each of said serially coupled plurality of gain controllers.